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## 2.0 Activities and Accomplishments—1999

### 2.1 Meetings

The Council convened ten times during 1999, six via teleconference. The meetings were held as follows:

- January 5, teleconference
- March 1-2, Washington, DC
- April 8, teleconference
- May 27-28, Portland, Oregon
- July 8, teleconference
- August 17, teleconference
- September 13-14, Louisville, Kentucky
- November 10, teleconference
- December 6-7, Washington, DC
- December 21, teleconference

In general, the teleconference calls were held for the purpose of reviewing and approving the minutes of the preceding face-to-face meeting and establishing the agenda for the succeeding face-to-face meeting.

#### 2.1.1 March Meeting—Washington, DC

The Council heard a presentation by Dr. Frank Thomas on the *Unified National Program for Floodplain Management*. Dr. Thomas provided a broad overview and history of the Unified Program and the purpose and success of the Water Resources Council. The Water Resources Council was very active and influential in the 1970's, but lost political support in the 1980's. The Water Resources Council published the *Unified Program* providing the underpinnings for the National Flood Insurance Program (NFIP). Dr. Thomas commented that when the NFIP was first enacted into law, less than 100 communities had adopted floodplain management regulations, but now almost 20,000 communities have regulations in place.

The *Unified National Program for Floodplain Management* has been republished several times since it was initially published, most recently in 1994. The 1994 report spells out four goals:

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- Formalize a national goal-setting and monitoring system;
- Reduce by at least half the risk to life and property in floodplains;
- Develop and implement a process to impart positive attitudes toward floodplain management; and
- Establish floodplain management in communities nationwide.

The goals can be achieved if the following strategies are implemented:

- Modify flooding;
- Change how people choose to locate and build in floodplains through standards for building and design;
- Minimize the impact of flooding by changing people's attitudes; and
- Work with the natural and beneficial functions of floodplains.

The Council also heard from Gus Tjoumas, Director of Dam Safety and Inspection, Federal Energy Regulatory Commission (FERC). Mr. Tjoumas described the purpose and functions of FERC and the relationship between dam safety and floodplain management. FERC requires licensees to prepare Emergency Action Plans. The plans must include maps for the areas downstream of hydroelectric generating dams that could potentially be flooded due to a failure of a dam. These maps must be provided to local and state emergency management officials. FERC works closely with emergency management personnel at the state and local government level, but has not yet been actively working with floodplain management officials at either the state or local level. It is seeking advice on ways to improve communication to these officials. Inclusion of dam failure inundation maps as part of the floodplain maps produced by FEMA would facilitate and improve communication with floodplain management officials at all levels of government.

The Council received reports from FEMA. The first report was on the status of changes to study guidelines that would allow FEMA to map floodplains using hydrologic analyses based on future development of the watershed. Future development can dramatically increase flood discharges and flood levels.

The second report addressed FEMA's efforts to develop guidelines for studying erosion of riverbanks. Riverbanks erode in virtually every corner of the country, but in some locations, particularly the arid southwest, the banks can erode to such an extent that the river will migrate completely outside the mapped 100-year floodplain during a single flood event. Establishing study and mapping standards to address this unique hazard is extremely important for both insurance and floodplain management purposes.

Finally, the Council was introduced to the new contractor hired to run the Map Services Center and the contractor's plan to implement FEMA's Map Modernization Plan. Some activities to improve the map distribution process will be implemented under existing funding levels, but others, particularly those to distribute maps electronically over the Internet, are not possible under current funding levels.

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### 2.1.2 May Meeting—Portland, Oregon

The May meeting was held in conjunction with the Association of State Floodplain Managers (ASFPM) national meeting. The Council was pleased by the interest shown by ASFPM members and the attendance during the meeting by their membership.

Mr. Michael Armstrong, FEMA's Associate Director for Mitigation, addressed the Council, expressing his appreciation for its hard work and commitment to improving the maps and mapping process. Mr. Armstrong emphasized the need for future planning at the local level to avoid future flooding losses and the role FEMA plays in providing information on floodplains. He concluded by stating that a cornerstone of sound mitigation planning is a reliable map of flood-hazard areas and thanked the Council for its efforts.

The Council addressed several key issues that pose some of the greatest challenges to FEMA—Unnumbered A-Zones and improving cooperation with state and local governments. The Council was pleased to receive the advice of ASFPM members representing both state and local officials in the ensuing discussions.

Unnumbered A-Zones are those areas identified on Flood Insurance Rate Maps (FIRMs) as being potentially flood-prone, but with little or no supporting data. In many instances they were mapped under the “emergency phase” of the NFIP as “approximate” floodplain areas for informational purposes, but have never been more accurately delineated. Recent work by the state of Wisconsin to use simplified study methods coupled with improved topographic mapping as a digital terrain model provided by local government has proven successful in providing better defined floodplain limits that are adequate for local land-use regulations. Similar studies in South Carolina by Hayes, Seay, Mattern & Mattern have proven equally effective. Completion of USGS Digital Orthophoto Quads on a nation-wide basis would provide one of the tools necessary to improve the mapping of all Unnumbered A-Zones throughout the country.

Unnumbered A-Zones comprise over half of the mapped floodplains in the United States, yet often include those areas most likely to be developed in the near future. FEMA has focused its attention on doing detailed studies in areas that have already been developed or areas that have experienced recent floods. One of the most challenging tasks for local and state governments in carrying out their responsibilities to implement sound floodplain management practices is imposing land-use regulations within the Unnumbered A-Zones. Too often landowner disputes and challenges to flood-zone determinations arise from maps that are not credible. It is precisely in these areas of confusion (where the true risks are waiting to be substantiated) that the sale of flood insurance is most likely to be questioned, and where a majority of the requests for Letters of Map Change originate.

Improving the delineation of the Unnumbered A-Zones would greatly improve the ability of local officials to enforce floodplain zoning ordinances, reduce challenges to flood hazard determinations, and significantly reduce the workload, and costs, for FEMA.

FEMA has made great strides in improving relationships with, and participation by, state and local partners in improving floodplain management and flood mitigation. In 1997 Director Witt introduced *Project Impact: Building Disaster Resistant Communities*, an initiative to encourage

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local and private partners to proactively take steps to reduce flood losses. In 1999 FEMA developed the Cooperating Technical Communities (CTC) initiative to complement Project Impact. The CTC partnerships are designed to encourage state or local government to take a proactive role in updating and maintaining the maps used for flood insurance and floodplain management. Under CTC agreements, communities can be rewarded by contributing to, or undertaking, studies or restudies of their flood-prone areas. Activities that can be classified as “CTC-eligible” are:

- Refinement of Unnumbered A-Zone boundaries;
- Hydrologic and hydraulic modeling and floodplain mapping;
- Digital Flood Insurance Rate Map (DFIRM) preparation;
- Re-delineation of detailed flood-hazard information using updated topographic data; and
- Analysis of community mapping needs to support FEMA’s Mapping Needs Update Support System (MNUSS).

Even though it has been in existence for only one year, the CTC initiative has already generated substantial support and participation across the nation. At the end of 1999 there were 29 communities participating as “Cooperating Technical Communities.” CTC partnerships exemplify two of the goals established during the Council’s first meeting in 1996: to encourage non-federal agencies to improve maps, and to actively promote partnerships with state and local governments to improve FIRMs. Full funding for FEMA’s Map Modernization Plan would likely result in a significant increase in the number of participating communities, and ultimately greatly reduce the cost to FEMA of updating and maintaining the maps.

### 2.1.3 September Meeting—Louisville, Kentucky

The Louisville-Jefferson County Metropolitan Sewer District (LJMSD) hosted the Technical Mapping Advisory Council’s meeting on September 13 and 14. The meeting was held in conjunction with the regularly scheduled meeting of the LJMSD Board of Supervisors to coincide with the signing of the CTC agreement between FEMA and the LJMSD. The Council greatly appreciates the hospitality and accommodations made by the LJMSD staff.

The focus of the September meeting was to begin work on the 1999 Annual Report to Director Witt. Discussion focused on recommendations that the Council wished to forward and additional information needed to form the recommendations. An in-depth discussion regarding “future-conditions hydrology” and how, where, and why it should be used in determining floodplain limits was a key focus of the meeting. A clear understanding of both the technical and legal aspects was necessary to arrive at a consensus. The Council developed a recommendation regarding use of “future-conditions hydrology” for inclusion in this report.

FEMA provided an update on the status of standards for Digital Flood Insurance Rate Map (DFIRM) graphics for the Council that led to a Council resolution to support the use of color in publishing DFIRMs, provided the additional cost to use color can be offset through user fees.

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The Louisville-Jefferson County Metropolitan Sewer District (LJMSD) provided an insightful presentation on LOJIC, the Louisville/Jefferson County Information Consortium. LOJIC is a culmination of local units of government pulling together to create a Geographic Information System (GIS) that serves each stakeholder far better than any could do independently. LOJIC provides much needed information to virtually every aspect of local government and private utilities that could not be developed individually by those groups, and is invaluable in maintaining and updating flood related data that can be instantly used to update FIRMs. LOJIC can be used to make accurate flood-boundary determinations and provide the landowner, lender, and local official with precise information regarding the location and elevation of every property within the boundaries of the LJMSD.

Council members attended the signing of the CTC agreement between FEMA and the Louisville/Jefferson County Sewer District. One of the original goals established by the Council in its inaugural meeting in May 1996 was to seek ways to encourage non-federal entities to improve the maps used for the NFIP. The signing of the CTC agreement between FEMA and the LJMSD is consistent with and leads toward meeting this goal. It is important to recognize that the LJMSD has had the expertise and facilities to perform the activities of a CTC for many years. What was lacking was the ability, or willingness, of a federal agency (FEMA) to delegate the authority for an important aspect of a program. The development of the CTC initiative and the signing of the CTC agreement with LJMSD demonstrate a “new way of thinking,” strongly endorsed and supported by the Council.

### 2.1.4 December Meeting—Washington, DC

The entire meeting was devoted to identifying issues that the Council should address in the year 2000 and the preparation of this Annual Report. The meeting was hosted by Bank of America.

## 2.2 Presentations and Outreach Activities by Council Members

During the course of 1999 several members of the Technical Mapping Advisory Council made presentations or attended meetings to discuss the purpose and progress of the Council. The Technical Mapping Advisory Council's objective of public awareness and involvement in floodplain management has been well supported by these activities.

**Mark Riebau**, Chairman, ASCE, addressed the following organizations:

- Illinois Association of Flood and Stormwater Management Agencies - Chicago, IL (March 1999)
- NATO sponsored Advanced Research Workshop - Malenovice, Czech Republic (May 1999); Countries represented at the workshop included Bulgaria, Canada, Czech Republic, England, Germany, Hungary, Italy, the Netherlands, Poland, Portugal, Russia, Slovakia, Turkey, Ukraine, and the United States.
- Indiana Association for Flood and Stormwater Management - Angola, IN (October 1999)

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- National Association of Flood and Stormwater Management Agencies - Philadelphia, PA (November 1999)

**Brian Hyde**, ASFPM: made presentations at the following meetings:

- Committee meeting of ASFPM Mapping and Engineering Standards Committee - Portland, OR (May 1999); entire agenda of this committee meeting was devoted to discussion of the work of the Council.
- Informational and discussion breakfast meeting during ASFPM Annual Conference - Portland, OR (May 1999); entire agenda of this breakfast meeting was also devoted to information about and discussion of the work of the Council.

**Wendy Lathrop**, ACSM: Presented community workshops in reading floodplain management ordinances and FIRMs, Philadelphia, PA March 1999 and October 1999. Her activities with ACSM constituents include:

Presentation of programs on Map Modernization and general familiarity with the NFIP:

- PA Society of Land Surveyors - Hershey, PA (January 1999)
- IN Association of Land Surveyors - Evansville, IN (January 1999)
- NJ Society of Professional Land Surveyors - Atlantic City, NJ (February 1999)
- American Congress on Surveying and Mapping - Portland, OR (March 1999)
- Rolling Hills chapter of NJSPLS - Pittstown, NJ (May 1999)
- Technology Transfer Tutorials - Little Rock, AR (May 1999)
- Lehigh County Planning Commission - Allentown, PA (September 1999)
- PLSANJ chapter of NJSPLS, Trenton - NJ (September 1999)
- American Congress on Surveying and Mapping - Grand Rapids MI, (October 1999)

Publications:

- Professional Surveyor Magazine (Map Modernization), Jan 1999
- Coordinate (NJSPLS - Elevation Certificates), Summer 1999
- ACSM Bulletin (Elevation Certificate updates), August 1999

Participation in Map Modernization Program: Testing of CD ROM Prototype of Elevation Certificate with instructions and photographs. Evaluation and presentation of DFIRM prototypes (2 series, presented to colleagues).